

REMARKS

The Examiner is thanked for the personal interview conducted on September 13, 2005. In the interview, the prior art and claims 2, 11 and 25 were discussed. The undersigned presented proposed amendments to claims 2 and 11, the details of which were discussed in conjunction with placing the claims in an allowable condition.

In the Office Action, the Examiner rejected claims 2-7, 11-16 and 25-30 under 35 USC 103. These rejections are fully traversed below.

Claims 2-7 and 11-16 have been amended. Claims 2 and 11, in particular, have been amended to expedite the prosecution of this case. It is still believed that present invention overcomes the cited art without these amendments, and therefore the Applicant reserves the right to go after the original claims in a continuing application. Claims 33-43 have been added. Thus, claims 2-7, 11-16, 25-30 and 33-43 are pending in the application. Reconsideration of the application is respectfully requested based on the following remarks.

Claim Rejections – 35 USC 103

Claims 2-4, 11-13 and 25-27 have been rejected under 35 U.S.C. 103(a) as being unpatentable over *Le et al* (US2004/0022024) in view of *Klein et al* (5,867,095).

The Examiner states that *Klein* teaches a cooling system (page 2 of office action). This however is incorrect. *Klein* is completely silent to cooling systems. *Klein* is directed at burglar and fire detection control panels with tamper detection circuitry. *Klein* is non analogous art, and simply provides no motivation to apply his technology to computing devices let alone cooling ducts used in computing devices. Accordingly, the rejection is improper and should be withdrawn.

Claim 2 (and its dependents)

In contrast to both references, claim 2 (and its dependents) specifically requires, "...a removable panel (that)...helps direct airflow from a fan across the heat producing element." *Klein* is completely silent to anything that directs air over a heat producing element, and *Le* only discloses a cooling hood that is mounted as for example to a circuit board. The cooling hood of *Le* is NOT removable. *Le* states, "...the cooling hood is mounted within the housing (page 1, paragraph 10," and "...the duct includes at least two sides such as top side 60, a first side 62 and a second side 64, which are connected with the circuit board 24...(page 1, paragraph 13) ..." *Le* even goes as far as to state that the cooling hood may be hermetically sealed to the circuit board (page 2, paragraph 13). Accordingly, the rejection is unsupported by the art and should be withdrawn.

Claim 11 (and its dependents)

In contrast to both references, claim 11 (and its dependents) specifically requires, "...a panel configured to be removably attached to the housing...the panel having a contoured portion that protrudes into the space provided by the housing between the fan unit and the microprocessor, the contoured portion being configured to direct flow of air from the fan unit across the microprocessor so as to cool the microprocessor..." As mentioned above, *Klein* is completely silent to anything that directs air over a heat producing element, and *Le* only discloses a cooling hood that is mounted as for example to a circuit board. The cooling hood of *Le* is NOT removable. As such, neither reference teaches or suggests a removable panel that includes contoured portions for directing air. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Claim 25 (and its dependents)

In contrast to both references, claim 25 (and its dependents) specifically requires, "...a housing divided into a plurality of discrete thermal zones, each thermal zones compartmentalizing a heat producing element..." *Klein* is completely silent to an air cooled device let alone one that includes a plurality of thermal zones. And while *Le* may disclose a cooling hood, he does not teach or suggest a housing divided into a plurality of discrete thermal zones. As shown in Fig. 1, the housing includes only a single thermal area that includes various components 26, 42, 44, 46. These components are simply not compartmentalized by thermal zones. In contrast, the present invention, as shown in Fig. 3 includes at least two thermal zones that are physically separated by a shelf 170. Furthermore, even if the various sections of the housing of *Le* are thermal zones (which they are not), they each don't include a fan as further required by claim 25. Claim 25 specifically requires, "...a fan disposed in each of the thermal zones..." This is not taught in either reference. Moreover, neither reference teaches or suggests a removable duct door having one or more contoured portions. See above. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Claims 5, 6, 14, 15, 28 and 29 have been rejected under 35 U.S.C. 103(a) as being unpatentable over *Le* et al in view of *Klein* et al and further in view of *Hoover* (5,452,181).

Hoover does not overcome the deficiencies of *Le* and *Klein*. All the references fail to teach a removable panel (among other elements) as described above in accordance with the independent claims. With regards to the claims in question, the Applicant respectfully disagrees that it would have been obvious to combine the system of *Hoover* to the device of *Le* and *Klein* to come up with the claimed invention. While *Hoover* may disclose generating a warning and performing a managed shut down in the event of fan failure, he does not teach or suggest generating a warning in the anticipation of an element overheating due to a missing duct that helps facilitate the cooling of the element (if the duct is missing the heat dissipation of the fans alone may not be enough to prevent the element from overheating, therefore the system is alerted to this fact in order to prevent damage) It appears that the Examiner used hindsight

reconstruction to create the claimed invention out of isolated teachings in the prior art. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Claims 7, 16 and 30 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al in view of Klein et al and further in view of Kaminski et al (6,654,894).

Kaminski does not overcome the deficiencies of *Le* and *Klein*. All the references fail to teach a removable panel (among other elements) as described above in accordance with the independent claims. With regards to the claims in question, the Applicant respectfully disagrees that it would have been obvious to combine the system of *Kaminski* to the device of *Le* and *Klein* to come up with the claimed invention. While *Kaminski* may disclose controlling fan speed according to the temperature of a power supply and a processor, he does not teach or suggest controlling fan speed due to a missing duct that helps facilitate the cooling of either of these elements. It appears that the Examiner used hindsight reconstruction to create the claimed invention out of isolated teachings in the prior art. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Summary

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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